

Title (en)
SOLID-STATE SUN TRACKER

Title (de)
FESTKÖRPER-SONNENVERFOLGER

Title (fr)
DISPOSITIF À SEMI-CONDUCTEURS DE LOCALISATION DU SOLEIL

Publication
EP 2108098 A4 20100407 (EN)

Application
EP 08724540 A 20080117

Priority
• US 2008000570 W 20080117
• US 70075107 A 20070130

Abstract (en)
[origin: US7902490B2] This invention deals with the general topic of adaptive non-imaging tracking of the sun. A transmission-mode electro-optical system is presented for solar energy tracking and collection. The scale of the system may range from small portable systems to large-scale industrial power plants used for the production of environmentally benign energy. It maybe integrated directly into buildings and other platforms without the need for heliostats to hold photovoltaic cells or other energy conversion devices above the building or other host platform. It makes solar energy harvesting systems practical by allowing the separation of tracking, collection, concentration, aggregation, distribution, and energy conversion. This novel system is unique and distinct from other sun tracking and energy conversion systems because it allows adaptive solid-state electronics to be used in place of conventional mechanical tracking heliostats. Furthermore, it is highly precise and therefore allows very high levels of concentration to be achieved in an dynamic environment. It is also cost effective because it leverages integrated opto-electronics instead of mechanical devices to perform sun tracking.

IPC 8 full level
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G01S 3/7861 (2013.01 - EP US); **G01S 3/7862** (2013.01 - EP US); **Y02B 10/10** (2013.01 - EP US); **Y02B 10/20** (2013.01 - EP US); **Y02P 80/20** (2015.11 - EP US)

Citation (search report)
• [A] US 5917646 A 19990629 - SHERIDON NICHOLAS K [US]
• [A] US 5717515 A 19980210 - SHERIDON NICHOLAS K [US]
• [A] RABINOWITZ M ET AL: "Electronic film with embedded micro-mirrors for solar energy concentrator systems", SOLAR ENERGY, PERGAMON PRESS. OXFORD, GB, vol. 77, no. 1, 1 January 2004 (2004-01-01), pages 3 - 13, XP004510996, ISSN: 0038-092X

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